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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,906	11/24/2003	Naiyong Jing	59424US003	5294
32692	7590	07/06/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			WU, IVES J.	
PO BOX 33427			ART UNIT	PAPER NUMBER
ST. PAUL, MN 55133-3427			1713	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/720,906	JING ET AL.
	Examiner Ives Wu	Art Unit 1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 6/24/05.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-65 is/are pending in the application.
  - 4a) Of the above claim(s) 20-57 and 60-65 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9, 11 and 13-15, 58, 59 is/are rejected.
- 7) Claim(s) 10, 12, 16-19 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

***Election/Restrictions***

(1). Applicant's election with traverse of Group I, Claims 1-19, 58 and 59 in the reply filed on June 24, 2005 is acknowledged. The traversal is on the ground(s) that (i). Groups I-IV are interrelated; (ii). The classification of claims of Groups I-IV in different classes and subclasses is not sufficient grounds to require restriction; (iii). Restriction to be effected between the claims of Groups I-IV would place an undue burden by requiring payment of a separate filing fee for examination of the nonelected claims, as well as the added costs associated with prosecuting two applications and maintaining two patents.

(2). As to the arguments (i) & (ii), this is not found persuasive because Group I and Group II are patentably distinct as process of making and product made; Group III and Group IV are patentably distinct as process of making and product made; Group I and Group III are patently unrelated because Group I is method to cure highly fluorinated single functional  $-SO_2X$  by crosslinking agent and Group III is method to crosslink by itself without additional crosslinking agent; Group I and Group IV are patentably unrelated for the reason that Group IV is polymer product made of method disclosed in Group III and Group I is method of making highly fluorinated single functional group  $SO_2X$  by crosslinking agent; Group II and Group III are patentably unrelated for the reason that Group II is a polymer product made of Method disclosed in Group I and Group III is method of making two functional groups highly fluorinated polymer by self crosslinking; Group II and Group IV are patentably unrelated for the reason that Group II is a polymer

product made by method disclosed in Group I and Group IV is another polymer product made by another method disclosed in Group III; Because these inventions are patentably distinct for the reasons given above and acquired a separate status in the art because of their recognized divergent subject matter and it does render undue burden for the examiner to search all inventions, restriction for examination purposes as indicated is proper.

As to the argument (iii), the fee regulation is set up by the USPTO, it is out of the examiner's control.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

(3). The text of those sections of Title 35, U.S.Code not included in this action can be found in a prior Office action.

Claims 1-9,11,13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerres et al (US20030032739A1) in view of Mao et al (US006090895A), Hedhli et al (US006872781B2) for the same reasons as recited in the Office action dated April 28, 2005.

Claims 14,15,58 & 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerres et al (US20030032739A1) in view of Mao et al (US006090895), Hedhli et al (US006872781B2) and further in view of Yang (US20040241518A1) for the same reasons as recited in the Office action dated April 28, 2005.

Claims 10,12,16,17,18,19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims because the disclosure of these dependent claims overcome the prior art.

***Response to Arguments***

(4). Applicant's arguments filed on June 24,2005 have been fully considered but they are not persuasive.

In claim 1, applicant argues that Kerres discloses no such a crosslinking agent according to formula  $Ar_n R^1$ , however, Kerres et al disclose a crosslinking bridge  $NHR-(CH_2)_x-NHR$  where R is alkyl, hydroxyalkyl, aryl in his abstract, this crosslinking bridge is equivalent to the formula  $Ar_nR^1$  by the following setting: n= 2 and  $R^1= aryl$  ( $n, R^1$  are defined in the applicant's claim 1).

In other words, the formula **RNH – (CH<sub>2</sub>)<sub>x</sub> – NHR** of crosslinking bridge disclosed by Kerres is  $Ar - (NH-(CH_2)_x-NH) - Ar$  (when R is aryl) which meets formula  $Ar_2R^1$  in instant claim 1.

Furthermore, this crosslinking bridge is disclosed as crosslinking agent in paragraph [0007] of Kerres et al (US20030032739A1).

In claim 2, applicant states that Kerres et al disclose no such crosslinks made according to formula  $(-SO_2Ar)_nR^1$ . However, Kerres et al disclose in citations of claim 18:

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where polymer-SO<sub>2</sub>-Y-SO<sub>2</sub>-polymer crosslinking bridges are present in the polymer, where Y is the crosslinking bridge: - (CH<sub>2</sub>)<sub>x</sub> -, - arylene -, - (CH<sub>2</sub>)<sub>x</sub> – arylene -, - CH<sub>2</sub> – arylene – CH<sub>2</sub> -, or mixture thereof, and x is 3-12; this crosslinking bridge is equivalent to the formula (-SO<sub>2</sub>Ar)<sub>n</sub>R<sup>1</sup> by the following setting: n = 2 and R<sup>1</sup> = -(CH<sub>2</sub>)<sub>x</sub>- (n, R<sup>1</sup> are defined in the applicant's claim 1) and Y is mixture of - arylene – group and – (CH<sub>2</sub>)<sub>x</sub> – arylene – group such as – arylene – (CH<sub>2</sub>)<sub>x</sub> – arylene – (Y is defined in claim 18 of Kerres et al).

In other words, the formula polymer-**SO<sub>2</sub>-Y-SO<sub>2</sub>**-polymer of the crosslinking bridge disclosed by Kerres is polymer-SO<sub>2</sub>-arylene-(CH<sub>2</sub>)<sub>x</sub>-arylene-SO<sub>2</sub>-polymer (when Y is –arylene-(CH<sub>2</sub>)<sub>x</sub>-arylene-) which meets formula (-SO<sub>2</sub>Ar)<sub>2</sub> R<sup>1</sup>.

Applicant argues that no *prima facie* case of obviousness established, the allegation is in error because each crosslinking agent formula has been established in [0007], [0041], claim 18 of Kerres et al, and applicant has not provided any reason why 103 obviousness has not been established.

### ***Conclusion***

(5). **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-1114. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Ives Wu  
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Date: June 29, 2005

  
DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNICAL DIVISION